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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2
12819A LANCE, MISSILE NUMBER 3357, ROUND NUMBER 340-ECL, 3 JANU--ETC(U)
JAN 80

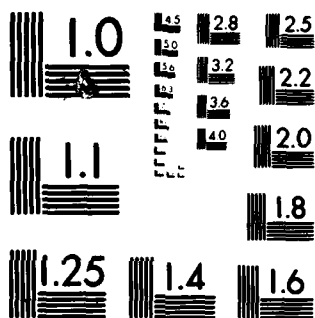
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White Sands Technological Center

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 12819A Lance, Missile Number 3357, Round Number 340-ECL are presented in tabular form.		

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INTRODUCTION

12819A Lance, Missile Number 3357, Round Number 340-ECL, was launched from SPEC, White Sands Missile Range (WSMR), New Mexico, at 0757 MST, 3 January 1980. The scheduled launch time was 0745 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the AFSWC Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RPTS T-9 pibal observation at:

SITE AND ALTITUDE

SPEC 3060 meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 74,000 feet in 500-foot increments.

SITE AND TIME

AFSWC 0915 MST

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
NSC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or special
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TABLE 1. Surface Observations taken at 0700 MST,
3 January 1980, at AFSWC, 12819A Lance,
Missile Number 3357, Round Number 340-ECL.

ELEVATION	4701	FT/MSL
PRESSURE	862.9	MBS
TEMPERATURE	-10.0	°C
RELATIVE HUMIDITY	80	
DEW POINT	-12.8	°C
DENSITY	1140	GM/M ³
WIND SPEED	CALM	KTS
WIND DIRECTION		DEGREES
CLOUD COVER	CLEAR	

TABLE 2. Surface Observations taken at 0915 MST,
3 January 1980, at AFSWC, 12819A Lance,
Missile Number 3357, Round Number 340-ECL.

ELEVATION	4701	FT/MSL
PRESSURE	863.4	MBS
TEMPERATURE	0.0	°C
RELATIVE HUMIDITY	77	
DEW POINT	-3.5	°C
DENSITY	1097	GM/M ³
WIND SPEED	CALM	KTS
WIND DIRECTION		DEGREES
CLOUD COVER	CLEAR	

PILOT BALLOON MEASURED WIND DATA

TABLE 3

RELEASED FROM SPEC SITE DATE 3 January 1980 TIME 0757 MST

RELEASE POINT COORDINATES (WSTM) X= UNK Y= UNK H= UNK

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC		CALM
30	005	01
60	005	02
90	005	03
120	005	04
150	005	05
180	005	06
210	005	07
240	005	08
270	005	08
300	005	09
330	004	09
360	004	09
390	003	09
420	002	09
450	001	09
480	360	10
510	359	10
540	358	10
570	357	10
600	356	10
630	355	10
660	353	10
690	351	10
720	349	10
750	347	09
780	345	09
810	343	08
840	341	08
870	339	08
900	337	07

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
930	335	07
960	335	07
990	335	07
1020	335	07
1050	335	07
1080	335	06
1110	335	06
1140	335	06
1170	335	06
1200	335	06
1230	335	06
1260	335	06
1290	335	06
1320	336	06
1350	336	06
1380	337	06
1410	337	05
1440	338	05
1470	338	05
1500	339	05
1530	339	05
1560	340	05
1590	341	05
1620	342	05
1650	343	05
1680	344	05
1710	345	05
1740	346	05
1770	347	05
1800	349	05
1830	351	05

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
1860	353	05
1890	355	05
1920	355	05
1950	355	05
1980	355	05
2010	355	06
2040	355	06
2070	355	06
2100	355	07
2130	355	07
2160	355	07
2190	355	07
2220	355	07
2250	354	07
2280	354	08
2310	353	08
2340	353	08
2370	352	09
2400	352	09
2430	351	09
2460	351	10
2490	350	10
2520	350	10
2550	350	12
2580	350	13
2610	350	14
2640	350	15
2670	350	16
2700	350	17
2730	350	18
2760	350	19

RELEASED FROM SPEC SITE

DATE 3 January 1980

TIME 0757 MST

[illegible][illegible][illegible]

GEOGETIC COORDINATES
33.64686 LAT DEG
106.58581 LON DEG

SIGNIFICANT LEVEL DATA
0030170001
AFSWC

TABLE 4

STATION ALTITUDE 4700.63 FEET MSL
3 JAN. 88
ASCENSION NO. 1

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT	
	AIR DEGREES	DEWPOINT CENTIGRADE		
862.9	4700.6	-10.0	-12.6	80.0
853.4	4984.6	-3.7	-5.1	90.0
850.0	5088.4	-3.1	-3.2	99.0
834.4	5571.8	-1.8	-1.9	99.0
827.4	5792.0	-2.2	-4.6	82.0
788.0	7062.0	-4.0	-4.1	99.0
768.0	7702.7	-3.4	-6.7	78.0
749.4	8365.9	-4.4	-9.8	66.0
740.0	8692.9	-4.1	-13.7	47.0
760.0	10127.5	-6.1	-19.4	34.0
637.8	12507.6	-9.0	-23.4	30.0
629.0	12861.3	-8.6	-23.0	30.0
576.6	15067.6	-11.0	-25.1	30.0
500.0	18611.0	-19.2	-32.0	31.0
400.0	23942.1	-31.2	-41.8	34.0

STATION ALTITUDE 4700.63 FEET MSL
3 JAN. 60 0700 HRS MST
ASCENSION NO. 1

UPPER AIR DATA
0030170001
AFSWC

GEODETIC COORDINATES
33.64686 LAT DEG
106.58581 LON DEG

TABLE 5

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4700.6	862.9	-10.0	80.0	1191.2	632.3	0.0	0.0	1.000267
5000.0	852.9	-3.6	91.3	1100.2	640.2			1.000267
5500.0	836.7	-2.0	99.0	1072.4	642.3			1.000266
6000.0	820.8	-2.5	84.8	1054.4	641.6			1.000257
6500.0	805.2	-3.2	91.5	1037.0	640.7			1.000254
7000.0	789.9	-3.9	98.2	1019.8	639.9			1.000251
7500.0	774.8	-3.6	84.6	999.4	640.2			1.000243
8000.0	760.0	-3.8	72.6	981.5	639.8			1.000236
8500.0	745.5	-4.3	58.2	964.7	639.2			1.000228
9000.0	731.2	-4.5	44.2	947.4	638.8			1.000221
9500.0	717.2	-5.2	39.7	931.8	638.0			1.000216
10000.0	703.5	-5.9	35.2	916.4	637.1			1.000211
10500.0	689.9	-6.6	33.4	900.9	636.3			1.000207
11000.0	676.5	-7.2	32.5	885.5	635.6			1.000203
11500.0	663.4	-7.8	31.7	870.4	634.8			1.000200
12000.0	650.6	-8.4	30.9	855.5	634.1			1.000196
12500.0	638.0	-9.0	30.0	840.9	633.4			1.000192
13000.0	625.6	-9.8	30.0	823.8	633.6			1.000189
13500.0	613.4	-9.3	30.0	809.4	633.0			1.000185
14000.0	601.4	-9.8	30.0	795.2	632.3			1.000182
14500.0	589.6	-10.4	30.0	781.3	631.7			1.000179
15000.0	578.1	-10.9	30.0	767.7	631.0			1.000175
15500.0	566.7	-12.0	30.1	755.5	629.7			1.000172
16000.0	555.4	-13.2	30.3	743.8	628.3			1.000169
16500.0	545.3	-14.3	30.4	732.3	626.9			1.000167
17000.0	533.5	-15.5	30.5	720.9	625.5			1.000164
17500.0	522.9	-16.6	30.7	709.8	624.1			1.000161
18000.0	512.4	-17.8	30.8	698.8	622.7			1.000158
18500.0	502.2	-18.9	31.0	688.0	621.2			1.000156
19000.0	491.9	-20.1	31.2	677.0	619.8			1.000153
19500.0	481.7	-21.2	31.5	665.9	618.5			1.000150
20000.0	471.8	-22.3	31.8	655.1	617.1			1.000148
20500.0	462.0	-23.5	32.1	644.4	615.7			1.000145
21000.0	452.4	-24.6	32.3	633.9	614.3			1.000143
21500.0	443.1	-25.7	32.6	623.6	612.9			1.000140
22000.0	433.9	-26.8	32.9	613.5	611.5			1.000138
22500.0	424.9	-28.0	33.2	603.6	610.1			1.000136
23000.0	416.1	-29.1	33.5	593.8	608.7			1.000133
23500.0	407.5	-30.2	33.8	584.2	607.3			1.000131

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4700.63 FEET MSL
3 JAN. 88
ASCENSION NO. 1 0700 HRS MST

SIGNIFICANT LEVEL DATA
0030170001
AFSWC

GEODETIC COORDINATES
33.64686 LAT DEG
106.58581 LON DEG

TABLE 4

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT	
	AIR DEGREES	DEWPOINT CENTIGRADE		
862.9	4700.6	-10.0	-12.6	80.0
853.4	4984.6	-3.7	-5.1	90.0
850.0	5088.4	-3.1	-3.2	99.0
834.4	5571.8	-1.8	-1.9	99.0
827.4	5792.0	-2.2	-4.8	82.0
788.0	7062.0	-4.0	-4.1	99.0
768.0	7702.7	-3.4	-6.7	78.0
749.4	8365.9	-4.4	-9.8	66.0
740.0	8692.9	-4.1	-13.7	47.0
700.0	10127.5	-6.1	-19.4	34.0
637.8	12507.6	-9.0	-23.4	30.0
629.0	12861.3	-8.6	-23.0	30.0
576.6	15067.6	-11.0	-25.1	30.0
500.0	18611.0	-19.2	-32.0	31.0
400.0	23942.1	-31.2	-41.8	34.0

STATION ALTITUDE 4700.63 FEET MSL
3 JAN. 80 0700 HRS MST
ASCENSION NO. 1

UPPER AIR DATA
0030170001
AFSWC

GEODETTIC COORDINATES
33.64686 LAT DEG
106.58581 LON DEG

TABLE 5

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4700.6	862.9	-10.0	80.0	1141.2	632.3	0.0	0.0	1.000267
5000.0	852.9	-3.6	91.3	1100.2	640.2			1.000267
5500.0	836.7	-2.0	99.0	1072.4	642.3			1.000266
6000.0	820.8	-2.5	84.8	1054.4	641.6			1.000257
6500.0	805.2	-3.2	91.5	1037.0	640.7			1.000254
7000.0	789.9	-3.9	98.2	1019.8	639.9			1.000251
7500.0	774.8	-3.6	84.6	999.4	640.2			1.000243
8000.0	760.0	-3.8	72.6	981.5	639.8			1.000236
8500.0	745.5	-4.3	58.2	964.7	639.2			1.000228
9000.0	731.2	-4.5	44.2	947.4	638.8	359.7	3.5	1.000221
9500.0	717.2	-5.2	39.7	931.8	638.0	7.9	5.1	1.000216
10000.0	703.5	-5.9	35.2	916.4	637.1	9.8	6.9	1.000211
10500.0	689.9	-6.6	33.4	900.9	636.3	6.4	3.6	1.000207
11000.0	676.5	-7.2	32.5	885.5	635.6	4.2	10.3	1.000203
11500.0	663.4	-7.8	31.7	870.4	634.8	359.9	12.0	1.000200
12000.0	650.6	-8.4	30.9	855.5	634.1	356.6	13.7	1.000196
12500.0	638.0	-9.0	30.0	840.9	633.4	352.6	16.5	1.000192
13000.0	625.6	-8.8	30.0	823.8	633.6	348.7	20.8	1.000189
13500.0	613.4	-9.3	30.0	809.4	633.0	346.4	25.1	1.000185
14000.0	601.4	-9.8	30.0	795.2	632.3	345.8	29.5	1.000182
14500.0	589.6	-10.4	30.0	781.3	631.7	345.3	33.9	1.000179
15000.0	578.1	-10.9	30.0	767.7	631.0	345.6	35.8	1.000175
15500.0	566.7	-12.0	30.1	755.5	629.7	346.1	36.8	1.000172
16000.0	555.4	-13.2	30.3	743.8	628.3	346.4	37.5	1.000169
16500.0	544.3	-14.3	30.4	732.3	626.9	345.7	37.3	1.000167
17000.0	533.5	-15.5	30.5	720.9	625.5	345.0	37.1	1.000164
17500.0	522.9	-16.6	30.7	709.8	624.1	344.3	37.9	1.000161
18000.0	512.4	-17.8	30.8	698.8	622.7	343.5	39.0	1.000158
18500.0	502.2	-18.9	31.0	688.0	621.2	343.1	39.9	1.000156
19000.0	491.9	-20.1	31.2	677.0	619.8	343.6	39.8	1.000153
19500.0	481.7	-21.2	31.5	665.9	618.5	344.1	39.8	1.000150
20000.0	471.8	-22.3	31.8	655.1	617.1	344.6	40.9	1.000148
20500.0	462.0	-23.5	32.1	644.4	615.7	345.0	43.2	1.000145
21000.0	452.4	-24.6	32.3	633.9	614.3	345.2	45.6	1.000143
21500.0	443.1	-25.7	32.6	623.6	612.9	343.7	49.3	1.000140
22000.0	433.9	-26.8	32.9	613.5	611.5	342.4	53.1	1.000138
22500.0	424.9	-28.0	33.2	603.6	610.1			1.000136
23000.0	416.1	-29.1	33.5	593.8	608.7			1.000133
23500.0	407.5	-30.2	33.8	584.2	607.3			1.000131

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4700.63 FEET MSL
 3 JAN. 88
 ASCENSION NO. 1

MANDATORY LEVELS
 0030170001
 AFSWC

0700 HRS MST

1

TABLE 6

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5085.	-3.1	-3.2	99.	9999.0	9999.0XX	
800.0	6665.	-3.4	-4.3	94.	9999.0	9999.0XX	
750.0	8339.	-4.4	-9.7	66.	349.2	3.0	
700.0	10119.	-6.1	-19.4	34.	5.8	9.0	
650.0	12013.	-8.4	-22.5	31.	352.4	16.7	
600.0	14046.	-9.9	-24.1	30.	345.3	34.3	
550.0	16235.	-13.7	-27.4	30.	345.4	37.2	
500.0	18587.	-19.2	-32.0	31.	343.7	39.8	
450.0	21130.	-24.9	-36.6	32.	343.3	50.5	
400.0	23905.	-31.2	-41.8	34.			

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4700.63 FEET MSL
3 JAN. 68 0915 HRS MST
ASCENSION NO. 2

SIGNIFICANT LEVEL DATA
0030170002
AFSNC

GEODETTIC COORDINATES
33.64686 LAT DEG
106.58591 LONG DEG

TABLE 7

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	
863.4	4700.6	0	77.0
859.0	5111.6	-1.0	79.0
815.0	6207.9	-4.2	76.0
773.0	7580.8	-3.5	74.0
752.8	8268.9	-3.3	41.0
722.6	9332.0	-3.7	21.0
700.0	10154.0	-5.2	20.0
647.6	12156.4	-6.5	19.0
617.3	13365.1	-6.9	19.0
500.0	18666.0	-19.1	25.0
418.8	22926.1	-28.2	37.0
400.0	24004.0	-30.7	33.0
333.0	28205.0	-40.2	35.0
308.0	30521.6	-45.6	
250.0	34436.3	-55.4	
205.0	38446.4	-63.6	
200.0	39024.2	-63.8	
193.6	39684.2	-61.9	
185.8	40520.6	-62.9	
181.8	40962.4	-62.8	
170.0	42345.3	-56.5	
150.0	44945.0	-59.5	
140.6	46273.2	-61.7	
130.2	47843.2	-61.5	
126.8	48388.0	-58.4	
123.4	48951.4	-58.7	
116.8	50097.2	-56.0	
107.0	51934.4	-56.3	
100.0	53345.8	-58.2	
82.0	57422.5	-63.0	
70.0	60642.6	-62.3	
58.6	64267.5	-62.3	
50.0	67515.0	-60.9	
36.0	74255.1	-61.5	

STATION ALTITUDE 9700.63 FEET MSL
3 JAN. 60 0915 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
0030170002
AFSWC

GEODEIC COORDINATES
33.64686 LAT DEG
106.50591 LON DEG

TABLE 8

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4700.6	863.4	-3.5	77.0	1098.9	644.5	0.0	0.0	1.000269
5000.0	853.6	-4.0	78.5	1089.4	643.7			1.000266
5500.0	837.4	-5.5	77.9	1074.5	641.9			1.000260
6000.0	821.5	-7.1	76.6	1060.0	640.1			1.000255
6500.0	805.9	-8.1	75.6	1041.6	639.6			1.000250
7000.0	790.5	-7.6	74.8	1020.7	639.9			1.000245
7500.0	775.4	-7.5	74.1	1000.2	640.2			1.000241
8000.0	760.6	-11.4	53.9	981.0	640.3			1.000232
8500.0	746.1	-16.1	36.7	962.7	640.1			1.000224
9000.0	731.9	-19.7	27.2	945.2	639.8			1.000217
9500.0	717.9	-23.2	20.0	928.0	639.3			1.000212
10000.0	704.2	-24.3	20.2	914.1	638.2			1.000208
10500.0	690.7	-24.9	19.8	898.3	637.6			1.000204
11000.0	677.4	-25.3	19.6	882.1	637.2			1.000201
11500.0	664.5	-25.7	19.3	866.2	636.8			1.000197
12000.0	651.5	-26.1	19.1	850.5	636.4			1.000193
12500.0	639.0	-26.3	19.0	834.8	636.2			1.000190
13000.0	626.7	-26.5	19.0	819.2	636.0			1.000186
13500.0	614.5	-26.7	19.2	804.6	635.4			1.000183
14000.0	602.5	-27.4	19.7	792.1	634.1			1.000180
14500.0	590.4	-28.1	20.3	779.9	632.7			1.000177
15000.0	578.8	-28.7	20.9	767.9	631.3			1.000174
15500.0	567.5	-29.4	21.4	756.0	629.9			1.000171
16000.0	556.1	-30.1	22.0	744.4	628.5			1.000169
16500.0	545.1	-30.9	22.5	732.9	627.1			1.000166
17000.0	534.4	-31.6	23.1	721.6	625.7			1.000163
17500.0	523.8	-32.3	23.7	710.6	624.3			1.000161
18000.0	513.5	-33.1	24.2	699.7	622.9			1.000158
18500.0	503.5	-33.8	24.8	689.0	621.5			1.000155
19000.0	493.1	-34.3	25.9	677.9	620.2			1.000153
19500.0	483.0	-34.7	27.3	666.8	618.8			1.000150
20000.0	473.0	-35.2	28.8	655.8	617.5			1.000148
20500.0	463.5	-35.7	30.2	645.1	616.2			1.000145
21000.0	453.7	-36.2	31.6	634.5	614.9			1.000143
21500.0	444.4	-36.7	33.0	624.1	613.6			1.000141
22000.0	435.2	-37.2	34.4	613.9	612.2			1.000138
22500.0	426.5	-37.8	35.8	603.9	610.9			1.000136
23000.0	417.5	-38.5	36.7	594.0	609.6			1.000134
23500.0	408.7	-40.1	34.9	584.3	608.1			1.000131
24000.0	400.1	-41.6	33.0	574.7	606.7			1.000129

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

GEODETIC COORDINATES
33.64686 LAT DEG
106.58581 LON DEG

UPPER AIR DATA
0030170002
AFSWC

TABLE 8 (CONT)

STATION ALTITUDE 9700.63 FEET MSL
3 JAN. 80 0915 HRS MST
ASCENSION NO. 2

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24500.0	591.4	-31.8	33.2	565.0	605.2	345.9	47.4	1.000127
25000.0	583.0	-33.0	33.5	555.4	603.8	346.4	50.6	1.000125
25500.0	574.7	-34.1	33.7	546.0	602.4	346.9	55.2	1.000122
26000.0	566.6	-35.2	34.0	536.7	601.0	347.6	58.9	1.000120
26500.0	558.7	-36.3	34.2	527.7	599.5	348.3	61.9	1.000118
27000.0	551.0	-37.5	34.4	518.8	598.1	348.7	63.0	1.000116
27500.0	543.4	-38.6	34.7	510.0	596.7	349.0	63.5	1.000114
28000.0	536.6	-39.7	34.9	501.4	595.2	349.6	63.2	1.000112
28500.0	528.6	-40.9	30.5**	492.0	593.7	350.3	63.2	1.000110
29000.0	521.3	-42.1	23.0**	484.3	592.2	351.6	65.8	1.000108
29500.0	514.1	-43.2	15.4**	475.9	590.7	352.6	68.5	1.000106
30000.0	507.1	-44.4	7.9**	467.7	589.2	353.0	71.4	1.000104
30500.0	500.3	-45.5	.3**	459.6	587.7	353.3	73.5	1.000102
31000.0	493.4	-46.8		451.5	586.1	353.5	74.5	1.000101
31500.0	486.6	-48.0		443.6	584.5	353.7	75.0	1.000099
32000.0	479.3	-49.3		435.8	582.9	353.8	75.2	1.000097
32500.0	473.6	-50.6		428.2	581.2	353.7	76.1	1.000095
33000.0	467.3	-51.8		420.7	579.6	353.5	77.3	1.000094
33500.0	461.1	-53.1		413.3	578.0	353.1	80.0	1.000092
34000.0	455.1	-54.3		406.1	576.3	352.7	82.4	1.000090
34500.0	449.2	-55.5		399.0	574.7	351.9	84.2	1.000089
35000.0	443.3	-56.6		391.2	573.4	351.0	85.4	1.000087
35500.0	437.4	-57.6		383.7	572.0	349.7	85.5	1.000085
36000.0	431.7	-58.6		376.3	570.6	348.4	85.0	1.000084
36500.0	426.2	-59.6		369.0	569.3	347.1	83.6	1.000082
37000.0	420.8	-60.6		361.9	567.9	345.9	81.6	1.000081
37500.0	415.3	-61.7		354.9	566.5	344.9	78.5	1.000079
38000.0	410.3	-62.7		346.1	565.2	343.8	75.2	1.000078
38500.0	405.3	-63.6		341.3	563.9	342.3	71.3	1.000076
39000.0	400.2	-63.8		333.2	563.7	340.5	67.8	1.000074
39500.0	395.4	-62.4		323.0	565.5	337.9	65.1	1.000072
40000.0	390.6	-62.3		314.9	565.7	335.0	62.6	1.000070
40500.0	386.0	-62.9		308.1	564.9	332.3	60.4	1.000069
41000.0	381.5	-62.6		300.3	565.3	329.4	58.4	1.000067
41500.0	377.1	-60.4		290.0	568.3	326.3	55.4	1.000065
42000.0	372.9	-58.1		280.0	571.3	322.9	52.6	1.000062
42500.0	368.7	-56.7		271.5	573.2	319.0	50.0	1.000060
43000.0	364.7	-57.3		265.8	572.4	314.7	47.7	1.000059
43500.0	360.8	-57.8		260.2	571.7	312.3	48.3	1.000058
44000.0	357.0	-58.4		254.7	570.9	310.3	49.4	1.000057

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4700.63 FEET MSL
3 JAN. 60 0918 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
0030170002
AFSVC

GEOGETIC COORDINATES
33.64686 LAT DEG
106.58581 LON DEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION (DEGREES TN)	SPEED KNOTS	
44500.0	183.2	-59.0		249.3	570.1	308.1	49.9	1.000056
45000.0	149.6	-59.6		244.0	569.3	305.8	50.3	1.000054
45500.0	146.0	-60.4		239.1	568.2	303.1	50.1	1.000053
46000.0	142.5	-61.2		234.2	567.1	297.8	47.7	1.000052
46500.0	139.0	-61.7		229.0	566.5	292.1	45.7	1.000051
47000.0	135.7	-61.6		223.4	566.6	288.3	43.9	1.000050
47500.0	132.4	-61.3		218.0	566.7	284.8	42.2	1.000049
48000.0	129.2	-60.6		211.8	568.0	284.3	40.9	1.000047
48500.0	126.1	-60.5		204.6	570.8	286.3	39.9	1.000046
49000.0	123.1	-58.6		199.9	570.7	288.5	39.4	1.000045
49500.0	120.2	-57.4		194.1	572.2	290.9	39.7	1.000043
50000.0	117.3	-56.2		188.5	573.8	293.3	40.2	1.000042
50500.0	114.6	-56.1		183.9	574.0	295.6	40.7	1.000041
51000.0	111.9	-56.1		179.6	573.9	297.9	41.3	1.000040
51500.0	109.2	-56.2		175.4	573.8	299.7	40.5	1.000039
52000.0	106.7	-56.4		171.4	573.6	301.4	38.6	1.000038
52500.0	104.1	-57.1		167.9	572.7	302.9	36.4	1.000037
53000.0	101.7	-57.7		164.4	571.8	301.5	33.0	1.000037
53500.0	99.3	-58.4		161.0	570.9	299.8	29.5	1.000036
54000.0	96.9	-59.0		157.6	570.1	297.3	27.2	1.000035
54500.0	94.5	-59.6		154.2	569.4	294.4	25.5	1.000034
55000.0	92.3	-60.1		150.9	568.6	291.8	24.1	1.000034
55500.0	90.0	-60.7		147.7	567.8	291.3	23.6	1.000033
56000.0	87.9	-61.3		144.5	567.0	290.7	23.0	1.000032
56500.0	85.0	-61.9		141.4	566.2	290.4	22.2	1.000032
57000.0	83.7	-62.5		138.4	565.4	290.1	21.3	1.000031
57500.0	81.7	-63.0		135.4	564.8	290.3	20.5	1.000030
58000.0	79.7	-62.9		132.0	564.9	291.0	19.8	1.000029
58500.0	77.0	-62.8		128.8	565.1	291.9	19.2	1.000029
59000.0	75.9	-62.7		125.6	565.2	293.2	19.4	1.000028
59500.0	74.0	-62.5		122.5	565.4	294.5	19.7	1.000027
60000.0	72.2	-62.4		119.4	565.5	294.7	19.9	1.000027
60500.0	70.5	-62.3		116.5	565.7	294.3	20.1	1.000026
61000.0	68.0	-62.3		113.6	565.7	293.9	20.2	1.000025
61500.0	67.1	-62.3		110.9	565.7	293.8	19.6	1.000025
62000.0	65.5	-62.3		108.2	565.7	293.6	18.9	1.000024
62500.0	63.9	-62.3		105.6	565.7	294.2	17.7	1.000024
63000.0	62.4	-62.3		103.0	565.7	295.6	16.1	1.000023
63500.0	60.0	-62.3		100.5	565.7	297.4	14.5	1.000022
64000.0	59.4	-62.3		98.1	565.7	295.8	12.1	1.000022

STATION ALTITUDE 4700.63 FEET MSL
3 JAN. 60 0915 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
0030170002
AFSWC

GEODETTIC COORDINATES
33.64686 LAT DEG
186.58581 LON DEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
64500.0	57.9	-62.2		95.7	565.8	293.1	9.7	1.000021
65000.0	56.5	-62.0		93.3	566.1	246.5	7.6	1.000021
65500.0	55.2	-61.8		90.9	566.4	267.7	6.5	1.000020
66000.0	53.8	-61.6		88.6	566.7	244.9	6.3	1.000020
66500.0	52.5	-61.3		86.4	567.0	228.7	7.2	1.000019
67000.0	51.3	-61.1		84.2	567.3	220.6	8.6	1.000019
67500.0	50.0	-60.9		82.1	567.6	214.9	10.2	1.000018
68000.0	48.8	-60.9		80.2	567.5	233.2	9.2	1.000018
68500.0	47.7	-61.0		78.3	567.5	261.1	9.4	1.000017
69000.0	46.5	-61.0		76.4	567.4	283.1	11.6	1.000017
69500.0	45.4	-61.1		74.6	567.3	297.4	13.8	1.000017
70000.0	44.3	-61.1		72.8	567.3	305.4	20.5	1.000016
70500.0	43.2	-61.2		71.0	567.2	309.6	24.0	1.000016
71000.0	42.2	-61.2		69.3	567.2	310.9	23.5	1.000015
71500.0	41.2	-61.3		67.7	567.1	312.2	23.1	1.000015
72000.0	40.2	-61.3		66.1	567.0			1.000015
72500.0	39.2	-61.3		64.5	567.0			1.000014
73000.0	38.3	-61.4		63.0	566.9			1.000014
73500.0	37.3	-61.4		61.5	566.9			1.000014
74000.0	36.5	-61.5		60.0	566.8			1.000013

STATION ALTITUDE 4700.63 FEET MSL
 9 JAN. 80
 ASCENSION NO. 2

MANDATORY LEVELS
 0030170002
 AFSWC
 TABLE 9

GEODETTIC COORDINATES
 33.64686 LAT DEG
 106.59581 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5108.	-1.0	-4.2	79.	9999.0	9999.0XX	
800.0	6685.	-4.0	-7.7	75.	9999.0	9999.0XX	
750.0	8359.	-3.3	-15.2	39.	314.2	3.3	
700.0	10145.	-5.2	-24.6	20.	314.1	10.9	
650.0	12050.	-6.4	-26.2	19.	348.3	21.0	
600.0	14097.	-8.6	-27.5	20.	349.5	28.3	
550.0	16289.	-13.6	-30.5	22.	337.0	29.9	
500.0	18642.	-19.1	-34.1	25.	336.4	34.7	
450.0	21188.	-24.5	-36.4	32.	341.8	41.6	
400.0	23968.	-30.7	-41.6	33.	345.6	45.1	
350.0	27035.	-37.6	-47.5	34.	348.7	63.1	
300.0	30465.	-45.6			353.3	73.5	
250.0	34366.	-55.4			352.0	84.0	
200.0	38936.	-63.8			340.4	67.8	
175.0	41643.	-59.2			324.8	54.1	
150.0	44831.	-59.5			306.1	50.2	
125.0	48552.	-58.6			286.9	39.6	
100.0	53189.	-58.2			300.4	30.7	
80.0	57741.	-62.9			290.9	19.9	
70.0	60443.	-62.3			294.2	20.1	
60.0	63566.	-62.3			296.7	13.3	
50.0	67271.	-60.9			215.0	10.1	
40.0	71819.	-61.3					

00 AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.